



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/744,904	01/31/2001	Mamoru Takahashi	1155-0214P	8530

2292 7590 03/18/2003

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

LEE, RIP A

ART UNIT	PAPER NUMBER
----------	--------------

1713

DATE MAILED: 03/18/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/744,904	Applicant(s) TAKAHASHI ET AL.	
	Examiner Rip A. Lee	Art Unit 1713	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-77 is/are pending in the application.
- 4a) Of the above claim(s) 13-77 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☒ Claim(s) 3-12 is/are objected to.
- 8) ☒ Claim(s) 1-77 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4,5,6</u> . | 6) <input type="checkbox"/> Other: |

Art Unit: 1713

DETAILED ACTION

This office action follows a response filed on February 27, 2003. Applicants have elected prosecution of group I, claims 1-12 with traverse.

Election/Restrictions

1. Applicant's election with traverse of group I in Paper No. 8 is acknowledged. The traversal is on the ground(s) that search of inventions of groups II-VI, and in particular, groups I, II, and IV, would not impose undue burden for the examiner. This is not found persuasive because the groups have been shown to lack unity of invention, as indicated in the previous office action (Paper No. 7). Therefore, the requirement is still deemed proper and is hereby made FINAL.

Claim Objections

2. Claim 3 is objected to because of the following informalities: (i) the mathematical relationship is not defined clearly; appropriate use of parentheses or brackets is required to remove ambiguity, (ii) replace "in the case of" with "when," and (iii) the sentence structure could be revised to make the claim language more clear.

3. Claims 4-12 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim may not depend on another multiple dependent claim. See MPEP § 608.01(n).

4. Claim 5 is objected to because of the following informalities: (i) the entire recitation from line 16 to line 22 is not understood; appropriate revision to clarify the claim is required, and (ii) on line 16, change “eluded” to “eluted.”

5. Claim 6 is objected to because of the following informalities: The recitation from line 3 to line 6 is not understood; appropriate revision to clarify the claim language is required.

6. Claim 8 is objected to because of the following informalities: The three equations share overlapping dependent variables. Thus, when K is 5.5 mole %, $T_m \leq 114.75$ (second equation) or $T_m \leq 114.95$ (third equation). The first inequality does not contain the set of all elements described by the second inequality. Appropriate correction is required.

7. Claim 12 is objected to because of the following informalities: (i) the antecedent of the word “them” (page 360, line 5) is not clear since there are several species preceding this noun, and (ii) the recitation on page 360, line 13-16, is not understood, (iii) it is not clear how each of the X groups listed may be bonded to another to form a ring, as recited; clarification is required in the subsequent response, and (iv) it appears that component (b) is an essential component; as such, the conditional phrase “if necessary” is incorrect. Appropriate correction is required.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. Claims 1, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,837,764 to Akagawa *et al.*

The prior art describes an ethylene-hexene copolymer having a molecular weight distribution of 2.0 (col. 10, line 49) and an ethylene-butene copolymer having a molecular weight distribution of 2.1 (col. 10, line 54). Insertion of comonomers in a 1,2-fashion would result in the formation of a copolymer that lacks methyl branching.

12. Claims 1 and 10 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,096,841 to Sacchetti *et al.*

Sacchetti *et al.* describes an ethylene-butene copolymer having a molecular weight distribution of 2.8 (col. 10, line 2) and an ethylene homopolymer having a molecular weight distribution of 3.4 (col. 9, line 51). Since the comonomer contains four carbon atoms, said ethylene-butene copolymer would not have methyl branching, nor would ethylene homopolymer since ethylene contains two carbon atoms only.

13. Claims 1-12 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 6,309,997 to Fujita *et al.*

Fujita *et al.* discloses polymers produced by polymerization of C₂₋₃₀ α -olefins such as ethylene, 1-butene, and 1-hexene (col. 119, lines 55-57; col. 120, lines 45-47). These may be used singularly or in combination of two or more kinds (col. 120, lines 48-49). Moreover, the authors indicate that the term "polymerization" used in the text is not limited to homopolymerization, but it also includes copolymerization (col. 9, lines 51-55). As such, the

Art Unit: 1713

copolymers recited in the present claims are well within the scope of the invention. The polymers are prepared from a catalyst containing (A) a transition metal complex and (B) at least one compound selected from the group consisting of (B-1) an organometallic compound, (B-2) an organoaluminum oxy-compound, and (B-3) a compound which reacts with (A) to form an ion pair (claim 1, *inter alia*). Inspection of the transition metal complexes (A) described therein reveals that it is essentially the same as that recited in present claim 12. Examples 1-31 describe a polymerization reactions using compounds A-1 and B-1 which result in the formation of ethylene homopolymer having an intrinsic viscosity of 0.21-22.4 dL/g. Notably, complexes A-1 and B-1 contain a hydrocarbon substituent in the R⁶ position, as required by the limitations of the present claims. Thus, the polymer and method of making the polymer are described adequately in the prior art.

The reference is silent with respect to both microstructural features and physical properties of the polymer. With regard to the former, since ethylene possesses only two carbon atoms, ethylene homopolymer would possess no methyl branching. As to the physical properties, a reasonable basis exists to believe that the materials described in Fujita *et al.* exhibit the recited properties because the polymer produced therein is prepared in essentially the same manner as that described in the present claims. One having skill in the art would appreciate that same materials prepared by the same method will exhibit the same chemical and physical properties. Since the PTO can not conduct experiments, the burden of proof is shifted to the Applicants to establish an unobviousness difference. *In re Fitzgerald*, 619 F.2d. 67, 205 USPQ 594 (CCPA 1980). See MPEP § 2112-2112.02.

14. Claims 1-12 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over EP 0 874 005 to Fujita *et al.*

EP 0 874 005 to Fujita *et al.* is equivalent to U.S. Patent No. 6,309,997 to Fujita *et al.* Therefore, the discussion of the disclosures of the prior art from the previous paragraph of this office action is incorporated entirely here by reference.

Information Disclosure Statement

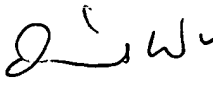
15. Reference JP 06-233723 to Hazan *et al.* was not considered since the invention therein relates to a device for liquid extraction. The patent is not related to the subject matter of the present invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rip A. Lee whose telephone number is (703)306-0094. The examiner can be reached on Monday through Friday from 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Wu, can be reached at (703)308-2450. The fax phone number for the organization where this application or proceeding is assigned is (703)746-7064. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0661.

ral

March 11, 2003


DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700